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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/770,819	01/26/2001	Joichi Saito	773-012	7270

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EXAMINER	
PHU, PHUONG M	
ART UNIT	PAPER NUMBER
2631	

DATE MAILED: 04/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/770,819

Applicant(s)

SAITO ET AL.

Examiner

Phuong Phu

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 May 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,6 and 7 is/are rejected.
- 7) ☒ Claim(s) 2-5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 January 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claim 7 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 7 recites the limitation "performing a **despreading** process on the signals which have been subjected to the stage addition" on lines 15 and 16. This limitation is not disclosed in the specification of the instant application. As being illustrated by component (110) in figure 3, it appears that the limitation should be --performing a **re-spreading** process on the signals which have been subjected to the stage addition--.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 6 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01.

Claim 6 recites the limitation “the path detection circuit” on line 2. This limitation is lack of antecedent basis. And further, the claim omits showing the functional/operational/connectional interrelationships of output signal(s), resulted by “the path detection circuit”, with other components (e.g., interference canceller device, stage addition circuit, etc., recited in claims 1 and 6) for making the claimed invention as a complete operative system.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

7. Claims 1 and 7 are rejected under 35 U.S.C. 102(e) as being anticipated by Madkour et al (6,574,270).

As per claims 1 and 7, see figure 4 and col. 8, line 42 to col. 10, line 67, Madkour et al discloses a method and associated system comprising:

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receiving step/means (410) of receiving a reception signal $r(k)$;

dividing step/means (420) of dividing the reception signal at a certain time intervals (each equal to the length of sequence $a(t)$), digitally converting or sampling (inherently included) the divided signals into signals at a fast rate (which, according to Nyquist, inherently must be at least twice faster than the corresponding signal's bandwidth) (see col. 8, line 63 to col. 9, line 10) and converting the divided signals into a configured signal including L signals identical to the divided signals for L stages of the L -stage correlator (425-1-425- L);

despreading step/means (420, 425) of despreading a signal comprising information of the configured signal and a feedback signal (outputted from means (415));

adding step/means (430) of adding the number of stages for despreading obtained from despreading step/means;

re-spreading step/means (450-1,...,450- M) of re-spreading signals obtained from adding step/means;

synthesizing step/means (455, 460, 465) of synthesizing the spread signals obtained from re-spreading step/means to generate replica signals; and

subtraction step/means (415) of subtracting between the replica signals and the reception signals and generating the feed back signal.

8. Claims 1 and 7 are rejected under 35 U.S.C. 102(e) as being anticipated by Sawashashi et al (6,137,788).

As per claims 1 and 7, see figures 10-12 and col. 16, line 11 to col. 17, line 63, Sawashashi et al discloses a method and associated system (figure 10) comprising:

receiving step/means (inherently included) of receiving a reception signal (S);

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dividing step/means (303, 403) (see figures 10 and 11) of dividing the reception signal at a certain time intervals (each equal to the length of 1 pilot block time TB (see col. 17, lines 30-33), digitally converting or sampling (inherently included) the divided signals into signals at a fast rate (which, according to Nyquist, inherently must be at least twice faster than the corresponding signal's bandwidth) and converting the divided signals into a configured signal including L1 signals identical to the divided signals for L1 stages of the L-stage correlator (212);

despreading step/means (212) of despreading a signal comprising information of the configured signal and a feedback signal (outputted from means (304);

adding step/means (214) of adding the number of stages for despreading obtained from despreading step/means;

re-spreading step/means (217) of re-spreading signals obtained from adding step/means;

synthesizing step/means (218, 305) of synthesizing the spread signals obtained from re-spreading step/means to generate replica signals; and

subtraction step/means (304) of subtracting between the replica signals and the reception signals and generating the feed back signal.

Allowable Subject Matter

9. Claims 2-5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. Claim 6 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

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Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phuong Phu whose telephone number is 703-308-0158. The examiner can normally be reached on M-F (8:30-6:00) First Monday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ghayour can be reached on 703-306-3034. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Phuong Phu
Primary Examiner
Art Unit 2631

Phuong Phu

Phuong Phu
03/16/04

**PHOUNG PHU
PRIMARY EXAMINER**